



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/805,682	03/13/2001	William J. Labarge	DP-302561/DEP-0128	3642

7590 06/13/2002
VINCENT A. CICHOSZ
DELPHI TECHNOLOGIES, INC.
Legal Staff, Mail Code: 480-414-420
P.O. Box 5052
Troy, MI 48007-5052

EXAMINER

JOHNSON, EDWARD M

ART UNIT	PAPER NUMBER
----------	--------------

1754

DATE MAILED: 06/13/2002

10

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application N .

09/805,682

Applicant(s)

LABARGE ET AL.

Examiner

Edward M. Johnson

Art Unit

1754

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 May 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4-16,19-22 and 24-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 25-29 is/are allowed.
- 6) ☒ Claim(s) 1,4-16,19-22,24,30 and 31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 2-4, 15, 17-18, 20-21, and 30 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The phrases, "at least about", "less than about", and "not more than about" appear contradictory because, for example, the recitation "less than" excludes values greater than or equal to the claimed value and "about" would appear to include such values. Examiner suggests "about", "at least", "less than", or "not more than".

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Art Unit: 1754

4. Claims 1, 3, 5-14, 16, 23, and 30-31 are rejected under 35 U.S.C. 102(b) as being anticipated by Mabilon et al. 5,051,392.

Regarding claims 1 and 30, Mabilon '392 discloses a catalyst for nitrogen oxides (see column 1, lines 18-20) comprising a porous layer containing calcium and neodymium (see abstract).

Regarding claim 3, Mabilon '392 discloses about 0.1 to about 35% calcium and neodymium (see abstract).

Regarding claims 5-6, Mabilon '392 discloses calcium (see abstract).

Regarding claims 7-8, Mabilon '392 discloses neodymium (see abstract).

Regarding claims 9-12, Mabilon '392 discloses 0-35% zirconium (see column 2, lines 32-37).

Regarding claims 13-14, Mabilon '392 discloses mixing ammonia with alumina (see column 5, lines 64-68 and Example 16).

Regarding claim 16, Mabilon '392 discloses a catalyst for nitrogen oxides (see column 1, lines 18-20) comprising a porous layer containing mixtures of calcium and neodymium (see abstract), zeolite (see column 3, line 54), 0-35% zirconium (see column 2, lines 32-37), and ceramic (see column 3, line 26).

Regarding claim 23, Mabilon '392 discloses oxides of calcium and neodymium (see abstract).

Art Unit: 1754

Regarding claim 31, Mabilon '392 discloses silicon, titanates, and zirconium (see column 3, lines 28-30).

5. Claims 1-4 and 16-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Campbell 4,988,660.

Regarding claim 1, Campbell '660 discloses catalysts comprising neodymium (see column 3, line 45) and calcium (see column 7 lines 52-60).

Regarding claims 16, 20-22, and 24 Campbell '660 discloses up to about 60% calcium oxide (see column 7, lines 52-60), neodymium (see column 3, line 45), zirconia (see column 7, lines 66-67), and alumina (see column 8, lines 14-18), the use of binder (see column 7, lines 38-40). All the claimed ranges of components include zero except the alkaline earth oxide, which is an approximation (at least about 2% may include values close or equal to zero).

Regarding claims 2-4 and 19 Campbell '660 discloses up to about 60% calcium oxide (see column 7, lines 52-60), neodymium (see column 3, line 45), zirconia (see column 7, lines 66-67), and alumina (see column 8, lines 14-18). All the claimed ranges of components include zero except the alkaline earth oxide, which is an approximation.

Regarding claim 23, Campbell '660 discloses calcium oxide (see column 7, lines 52-60).

Art Unit: 1754

6. Claims 21-24 and 30-31 are rejected under 35 U.S.C. 102(b) as being anticipated by Demmel 5,545,604.

Regarding claims 21-22, 24, and 30 Demmel '604 discloses a catalyst comprising 50-95% calcium oxide in the final product (see column 15, lines 49-53), alumina as binder, and 40% alumina (see column 31-33 and 36-38), wherein alumina also serves as support of the other materials (see column 2, lines 45-46).

Regarding claim 23, Demmel '604 discloses CaO (see column 15, lines 49-53).

Regarding claim 31, Demmel '604 discloses silica (see column 11, lines 19-22).

Allowable Subject Matter

7. Claims 25-29 are allowed.

8. Claim 15 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

9. The following is a statement of reasons for the indication of allowable subject matter: Although calcium oxide, neodymium catalysts with aluminum oxide binders appear to be well known in the art, it would not have been obvious to one of ordinary skill in the art at the time the invention was made to use an ammonium aluminum oxide sol binder in an amount of at least about 2 wt% and less than about 6 wt% in the catalyst of the instant claim

Art Unit: 1754

13. It also would not have been obvious to one of ordinary skill in the art at the time the invention was made to combine calcium and neodymium compounds with a support followed by combination with a binder and washcoating as in the method of the instant claim 25.

Response to Arguments

10. Applicant's arguments filed 5/9/02 have been fully considered but they are not persuasive.

It is argued that Mabilon teaches a catalyst having a prous layer. This is not persuasive because claims must be given their broadest reasonable interpretation. In re Morris, 127 F.3d 1048, 1054-55 (Fed. Cir. 1997). It is not considered unreasonable for one skilled in the art to interpret the claimed range of "at least about 50%" as incorporating at least some of the values encompassed by the prior art range of "0.1 to about 35%".

It is argued that to anticipate a claim, a reference must disclose each and every element of the claim. This is not persuasive because Applicant appears to suggest that "a specific claim element" has been "ignored" and that the recitation "at least about 70 wt%" is the same as the recitation "at least about 50 wt%". However, it seems clear that 50 is far closer to 35 than is 70. Further, the claim recites "at least about 50", which is considered to incorporate at least some of the same

Art Unit: 1754

values as "about 35". It seems equally clear that the recitation was not ignored, as it has been addressed multiple times in previous rejections. Rather, it is not considered unreasonable for one skilled in the art to interpret the claimed range of "at least about 50%" as incorporating at least some of the values encompassed by the prior art range of "0.1 to about 35".

It is argued that it should be further noted, with respect to claim 16, it is contended that Mabilon discloses a catalyst for nitrogen oxides. This is not persuasive because the recitation "at least about 2%" includes values close or equal to zero, as noted in the previous Office Action.

It is argued that Campbell discloses alkali metal doped perovskites useful in the oxidative coupling of alkanes to higher hydrocarbons. This is not persuasive because a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). The claim lacks novelty because

Art Unit: 1754

the instantly claimed catalyst and the catalyst of the prior art have the same ingredients. Applicant does not appear to allege any difference between the instantly claimed catalyst and that disclosed in Campbell other than the intended use of NOx reduction. Nor does Applicant appear to allege that the catalyst disclosed in Campbell does not, in fact, occlude NOx.

It is argued that the Examiner contends that "it is argued that Campbell discloses an alkali metal doped perovskites." This is not persuasive because NOx occlusion is an intended use of the instantly claimed catalyst (see above). The Examiner does not taken Official Notice of this, since the question of whether or not NOx occlusion is an intended use is not a matter of personal knowledge of the prior art. Therefore, Applicant's request for evidence support of Official Notice is considered moot. Further, Applicant does not appear to offer any argument in support of Applicant's apparent suggestion that NOx occlusion is not an intended use but rather a product limitation resulting "in a structural difference between the claimed invention and the prior art in order to patentably distinguish the invention from the prior art" (see above).

It is argued that with respect to the claim ranges, Applicant again assert that "at least about 70 wt%" is different from and does not include about 0.1 to 60 wt%. This is not

Art Unit: 1754

persuasive because it is not considered unreasonable for one skilled in the art to interpret the claimed range of "at least about 70%" as incorporating at least some of the values encompassed by the prior art range of "0.1 to about 60 wt%". These claim elements are addressed and met in all rejections of record; they were not ignored, as Applicant appears to suggest.

It is argued that Demmel fails to teach Applicants range or materials as is taught and claimed in claim 21. This is not persuasive because Demmel '604 discloses a catalyst comprising 50-95% calcium oxide in the final product (see column 15, lines 49-53), alumina as binder, and 40% alumina (see column 31-33 and 36-38).

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edward M. Johnson whose telephone number is 703-305-0216. The examiner can normally be reached on M-F 6:30-4:00.

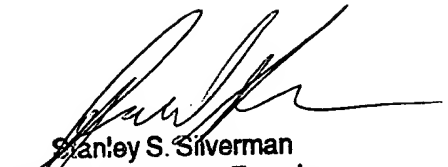
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley S. Silverman can be reached on 703-308-3837. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Art Unit: 1754

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

EMJ

June 7, 2002



Stanley S. Silverman
Supervisory Patent Examiner
Technology Center 1700